REMARKS/ARGUMENTS

In the above amendments to the specification, the paragraphs beginning on page 2, line 6; page 2, line 15; page 6, line 27; page 8, line 14; page 11, line 27; page 19, line 10; and page 20, line 6, have been amended to correct readily apparent minor typographical and editorial matters. For instance, the revisions made in the paragraph beginning at page 8, line 14, are supported by the preceding paragraph of the specification and FIG. 1.

Claims 1-5, 8, 9, 11, and 13-27 remain in this application.

Claims 6, 7, 10, and 12 have been canceled.

Claims 1, 4, 8, 9, 11, 14, 16, 17, 18, 19, 20, and 21 have been amended.

Claims 22-27 have been added.

Regarding the amended claims, independent claim 1 has been amended to include recitations of original claims 6 and 10, and based on the descriptions, such as provided at page 7, lines 3-9 and illustration of FIG. 1 (i.e., a motor driven fan causes air to flow through the filter and fan sections). Editorial revisions have been made in claims 4, 8 and 9. Claim 11 has been amended to incorporate recitations of original claim 12. Independent claim 14 has been editorially revised regarding the inside ("first") airspace and outside ("second") airspace, and amended to clarify that the filter unit is fluidly connected to the fluid connection provided between the inside and outside air spaces (page 18, lines 16-18; FIGS. 6, 8, 10, 12, element 78), the filter section includes a macroscopic dust prefilter and a HEPA filter which are mounted a movable second cart (e.g., FIG. 1), and that a motor-driven fan is used to cause air flow through the filter unit. Claims 16 and 19 have been editorially revised. Claims 17, 18, 20 and 21 have been revised to clarify the sequence of air flow between the filter and fan sections (page 15, line 13 to page 16, line 3; page 17, lines 4-21; FIGS. 6, 8, 10, 12). New claims 22-24 are based on the original descriptions set forth at page 25, lines 22-4; page 27, lines 10-11, and page 27, lines 15-16, respectively, of the present specification. New claim 21 recites language referring to blow-through or force-through mode of operation of the filter unit in which the fan in the fan section is used to blow air from the fan section into and through the filter section, as differentiated from an

alternative draw through mode of operation (page 7, line 12; page 14, lines 2-3; page 15, lines 13-23; FIGS. 4, 6). New claim 23 recites a gas adsorbent filter having a particular structure and features (page 9, lines 15-27). New claim 24 is supported, for instance, by original claim 6. New claim 25 is based, for instance, on the descriptions of original claim 8. New claim 26 is based, for instance, on page 7, lines 2-3. New claim 27 is supported, for instance, by page 17, line 4 *et seq.*, and FIGS. 10 and 12. No new matter has been introduced.

Response to Obviousness Rejections

I. In the Office Action, claims 1-5 and 7-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,853,441 to Groen et al.

Applicant respectfully traverses for at least the following reasons.

Independent claim 1:

In the above amendments, claim 1 has been amended, *inter alia*, to incorporate the recitations of claim 6 into its parent claim 1. Claim 6 was not included in this rejection. Presumably, the aforementioned amendment would serve to obviate this rejection. However, the differences between amended claim 1 and Groen et al. are not considered to end there.

Groen et al. describes a portable modular vacuum apparatus for cleaning ducts used in heating, ventilating, and air conditioning systems (HVAC). Groen et al.'s apparatus 10 comprises of three interconnectable modules: a prefilter modular unit 11 including a housing 12 containing air filter bags 24; a vacuum generator modular unit 31 containing a motor-driven fan 43/46 used to induce a vacuum in the pre-filter bag housing 12; and a Hepa filter modular unit 56 positioned upon the vacuum generator modular unit 31, in which the Hepa filter modular unit 56 includes a Hepa filter housing 57 defining a Hepa filter plenum chamber 63 and a filter chamber 66a in which a Hepa filter 66 is positioned (FIGS. 1-2). Groen et al. does not specifically show where the filtered air stream would exit filter chamber 66 housing the Hepa filter modular unit 56, although claim 1 refers to an "outlet" of the modular Hepa filter unit and FIG. 1 appears to

suggest that filter chamber 66 may have a mesh-like surface, although its function is not articulated in the reference (see col. 3, lines 29).

Unlike the recitations of present claim 1 (and claim 14), in Groen et al.'s apparatus 10, the prefilter unit 11 and the Hepa unit 56 are not mounted on a common movable cart, but instead they are physically separated by an intervening vacuum generating unit 31. Groen et al. does not mount the Hepa filter unit 56 directly on a movable cart, and instead the Hepa filter unit 56 piggybacks on vacuum generator modular unit 31 which has a lower frame 34 to which castor wheels 38 are secured (FIG. 1). As such, the Hepa filter unit 56 of Groen et al.'s apparatus 10 is not mounted on a common movable cart with the prefilter modular unit 11.

Also unlike the recitations of present claim 1, Groen et al.'s apparatus lacks a gas adsorbent filter. Groen et al.'s apparatus 10 would be understood to be designed for removing relatively benign dust and other macroscopic sized solid debris commonly encountered in HVAC ductwork. Groen et al.'s apparatus would not be expected to be capable of decontaminating air drawn from an airspace of potentially dangerous airborne gases, in addition to dust particle removal.

As reflected by the recitations of present claim 1, the filter unit **100** of an embodiment of the present invention is a multi-sectioned device that is rapidly deployable as a single unitary packaged unit capable of decontaminating air during CBR attacks or threats. It includes a pre-filter **11** to remove large particles that may prematurely load the HEPA filter **12** that removes biological and radiological contaminants and a high efficiency gas adsorber filter **13** that removes chemical and radiological gases **13** all in one common filter section **10**, and a motor driven fan **22** in a separate fan section **12**, with the capability of reconfiguring the sequence of the sections **10** and **20** such that the airflow either passes through the fan section **20** or the filter section **10** first before passing through the other remaining section, depending on the event in which the filter unit **100** is deployed to prevent releases of contaminates by the filter unit **100** that are harmful or potentially harmful to persons located inside or outside the enclosure. The filter unit **100** can be readily transported as a single unit to a location where it is desired to deploy it

for air decontamination (page 6, line 28 *et seq.*).

Claims 2-5, 8, 9 11, 13, 22 and 23, which depend from claim 1 (directly or indirectly), are distinguished from Groen et al. for at least the same reasons discussed above which are applicable to their parent claim 1. Other differences therebetween are thought to be present as well, which are highlighted below.

Claim 23 recites particular gas adsorbent filter performance and structural features which clearly are not taught or suggested by Groen et al.

Claim 22 recites an embodiment of the present invention in which the fan in the fan section **20** is operable to blow or force air (**62**, **77**) from the fan section into and through the filter section **10** (including the dust prefilter, HEPA filter and gas adsorbent filter), when the motor drives the fan (e.g., page 15, lines 14-23; page 17, lines 16-21; FIGS. 6, 12). By contrast, Groen et al.'s apparatus 10 is structurally limited to a pull-through or draw-through mode of operation insofar as air flow movement through the prefilter unit 11.

As explained and illustrated in the instant specification, factors such as whether the filter unit is deployed inside or outside the enclosure to be protected or alternatively decontaminated, and whether the enclosure will have a positive or negative pressure environment relative to external airspace, require different arrangements in the blow-through versus draw-through configuration needed on the fan section relative to the filter section of a filter unit (page 14, lines 12-18). The cited prior art lacks an appreciation of, and lacks the wherewithal to address, this need for a highly versatile, portable air decontaminating unit that can operate in either blow-through or draw-through air flow modes, depending on the given scenario presented.

Independent claim 14:

Unlike recitations of claim 14(b), and as indicated above, the Hepa filter unit 56 of Groen et al.'s apparatus 10 is not mounted on a common movable cart with the prefilter modular unit 11.

Claims 15-21 and 24-27, which depend from claim 14 (directly or indirectly), are distinguished from Groen et al. for at least the same reasons discussed above which are applicable to their parent claim 1. Other differences therebetween are thought to be present as well, which are highlighted below.

Unlike present Claim 16, Groen et al. fails to teach or suggest that the inside of the "duct system" (col. 3, lines 59-65) from which air is being drawn via conduit C for cleaning in the apparatus 10 comprises a "positive air pressure environment" as that term is understood by persons of ordinary skill in the pertinent field of endeavor. One of ordinary skill would more reasonably presume that the air in the duct system to be cleaned with Groen et al.'s apparatus 10 would be at atmospheric pressure absent express qualification in that respect.

Unlike claims 17, 21, and 22, and as noted above, Groen et al.'s apparatus 10 is a pull-through only configuration for movement of air through the prefilter unit 11. Present claims 17 and 21 recite that the air stream passes through the filter section including the prefilter after passing through the fan section.

Unlike present Claim 18, Groen et al. fails to teach or suggest that the inside of the "duct system" (col. 3, lines 59-65) from which air is being drawn via conduit C for cleaning in the apparatus 10 comprises a "negative air pressure environment" as that term is understood by persons of ordinary skill in the pertinent field of endeavor.

Unlike present claim 24, Groen et al. fails to teach or suggest a gas adsorbent filter.

Unlike present claim 27, Groen et al. fails to teach drawing the contaminated air stream from an airspace occupied by at least one person, as Groen et al. instead draws air from a duct system.

In view of at least the above, Applicants respectfully submit that Groen et al. does not render obvious any of present claims 1-5, 8, 9, 11, and 13-27, and accordingly request reconsideration and withdrawal of this rejection.

II. In the Office Action, claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Groen et al. in view U.S. Patent No. 6,022,389 to Vross et al.

Applicant respectfully traverses.

The Examiner indicates that Vross et al. "... discloses a portable filter unit for removal if noxious fumes comprising a series of filter media such as a dust prefilter (40), a HEPA filter (48) and a gas adsorbent filter (49) ...". The examiner is understood to urge that it would have been obvious to a person of ordinary skill in this field to "... provide multiple layers of filtration media as taught by Vross et al. in the portable filter unit of Groen et al. to provide high filtration efficiency to remove all different types of contaminants in the air stream and effectively decontaminated the air stream passing therethrough [sic]".

Applicant points that Vross et al. describe a filtration unit or system 10 for reducing the transmission of noxious fumes into the surrounding air during the application of a liquid roofing product on a roof of a building (FIG. 1; claim 1). Fumes from heated liquid roofing material in a tanker 1 and rooftop carrier 3 are collected and passed through a series of filters in the filtration unit 10 including an aluminum mesh filter 40, dust prefilters 41-42, HEPA filter 48, and a carbon filter 49 containing granular activated carbon filter 51 (col. 2, lines 43-61; col. 5, lines 13-34; FIG. 2). The final chamber or compartment 53 of the filtration unit 10 of Vross et al. is the blower module which creates a negative pressure within filtration unit 10 to draw the fumes into and through the unit 10 (col. 5, lines 35-55; col. 7, lines 33-37).

Vross et al. teach that the filtration unit 10 containing all the above-mentioned various types of filter modules is mounted on a single flatbed trailer movable by wheel assemblies to be mobile (col. 4, lines 38-40).

Clearly, Vross et al.'s filtration unit must be used outdoors, and can not be conveniently handled, transported and deployed without significant installation steps and infrastructure. Groen et al., from all appearances, describe an indoor unit while Vross et al. describe a bulky outdoor unit mounted on a flatbed trailer.

There is no bona fide motivation emanating from the Groen et al. and Vross et al. references to inspire one or ordinary skill to consider somehow modifying Groen et al.'s apparatus 10 to incorporate some of the filters taught by Vross et al. as suggested in the Office Action. Groen et al. does not suggest any need or desirability for somehow adding gas adsorption capability for the HVAC cleaning unit taught by that reference.

Moreover, the Office Action lacks detail on the specific modification being proposed to Groen et al. based on Vross et al. For instance, it is not clear from the Office Action as to where it is proposing to incorporate the filter modules taught by Vross et al. into Groen et al.'s apparatus. As noted above, Groen et al. has prefilter bags and Hepa filters installed in two physically separate modules.

Also, as previously noted, Groen et al. provide the prefilter unit and Hepa units on separate movable carriers, and also the fan unit must be situated between the prefilter bags and Hepa units in the Groen et al apparatus. In contrast, Vross et al. requires that all of the different types of filters be placed in a common series in advance of the blower, and that the filters and blower be mounted on a common single movable carrier and not separate carriers. Groen et al. and Vross et al. describe filter units which are quite different in structure and application. One of ordinary skill in the art would not have been motivated to modify Groen et al.'s apparatus based on Vross et al. in the manner proposed in the Office Action to somehow reconstruct the present claimed invention.

Also, and unlike claims 17, 21, and 22, and as noted above, Vross et al.'s and Groen et al.'s apparatuses are both pull-through only configurations for movement of air through the respective prefilter units thereof. Present claims 17 and 21 recite that the air stream passes through the filter section including the prefilter after passing through the fan section.

Unlike present Claim 18, Vross et al. and Groen et al. fail to teach or suggest that contaminated air is being drawn from a "negative air pressure environment" as that term is understood by persons of ordinary skill in the pertinent field of endeavor.

Unlike present claim 27, Vross et al. and Groen et al. fail to teach drawing the contaminated air stream from an airspace occupied by at least one person, as Vross et al. instead draws fumes from the inside of a tanker or a rooftop carrier containing liquid roofing material, and Groen et al. instead draws air from a duct system.

In view of at least the above, Applicant respectfully submits that no *prima facie* case of obviousness has been or can be established against any of the present claims based on the proposed manner of combining Groen et al. and Vross et al., and accordingly this rejection should be withdrawn.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the rejections. Applicant requests that a timely Notice of Allowance be issued in this case.

If the Examiner believes that a teleconference would be useful in expediting the prosecution of this application, the official is kindly invited to contact Applicants' undersigned representative of record.

Respectfully submitted,

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